

In the Claims:

1 1. (original) A method of detecting a redirecting process in
2 the course of a bi-directional non-contact making
3 transmission of data between a first transmitting and
4 receiving unit and a second transmitting and receiving unit
5 wherein the first transmitting and receiving unit transmits
6 an interrogation signal, the value of the amplitude (A1) of
7 the received interrogation signal is measured by the second
8 transmitting and receiving unit, the measured value of the
9 amplitude (A1) is transmitted back in a reply signal, and
10 the value of the amplitude (A2) of the received reply
11 signal is measured by the first transmitting and receiving
12 unit and compared with the returned value of the
13 amplitude (A1).

1 2. (original) A method in accordance with Claim 1, wherein a
2 predetermined value is assigned to a redirection indicator
3 in dependence on the result of the comparison.

Claims 3 to 10 (canceled).

1 11. (previously presented) A method in accordance with Claim 1,
2 wherein the measured value (A1) of the amplitude is
3 transmitted in encoded form with the reply signal.

1 12. (previously presented) A method in accordance with Claim
2 11, wherein the comparison is carried out within a

predefined time window which begins at the beginning of the transmission of the interrogation signal.

13. (previously presented) A method in accordance with Claim 1, wherein the first transmitting and receiving unit additionally compares the frequency (F2) of the interrogation signal with the frequency (F21) of the reply signal.

14. (previously presented) A method in accordance with Claim 13, wherein a check is made by the first transmitting and receiving unit as to whether the carrier frequency is present, without interruption, from the transmission of the interrogation signal until the reception of the reply signal.

15. (previously presented) A method in accordance with Claim 13, wherein the comparison of the amplitude values (A1, A2) and the comparison of the frequencies (F1, F21) is carried out simultaneously with the checking of an identification code.

16. (previously presented) The use of the method in accordance with Claim 1, for detecting unauthorized redirection of an authentication process employed in motor vehicles.

1 17. (new) A method of bi-directional data transmission between
2 two transmitting and receiving units including a first unit
3 and a second unit, said method comprising the steps:
4 a) transmitting a forward signal from said first unit;
5 b) receiving said forward signal by said second unit;
6 c) in said second unit, measuring a received forward
7 amplitude of said forward signal as received by said
8 second unit;
9 d) transmitting, from said second unit, a return signal
10 containing information representing said received
11 forward amplitude;
12 e) receiving said return signal including said
13 information by said first unit;
14 f) in said first unit, measuring a received return
15 amplitude of said return signal as received by said
16 first unit; and
17 g) comparing said return amplitude with said forward
18 amplitude to determine any difference therebetween.

1 18. (new) The method according to claim 17, further comprising
2 permitting said data transmission to continue if said
3 difference is zero or has a magnitude below a defined
4 threshold.

1 19. (new) The method according to claim 17, further comprising
2 providing an authorization signal to allow access to a
3 motor vehicle only if said difference is zero or has a
4 magnitude below a defined threshold.

1 **20.** (new) The method according to claim 17, wherein said return
2 signal further contains an identification code, and wherein
3 said method further comprises comparing said identification
4 code with an expected value, and providing an authorization
5 signal only if said identification code matches said
6 expected value and said difference is zero or has a
7 magnitude below a defined threshold.

1 **21.** (new) The method according to claim 20, further comprising
2 unlocking a lock of a motor vehicle in response to said
3 authorization signal.

1 **22.** (new) The method according to claim 17, wherein said
2 information represents said received forward amplitude in
3 encoded form.

1 **23.** (new) The method according to claim 17, wherein said
2 forward signal has a forward signal frequency, said return
3 signal has a return signal frequency, and said method
4 further comprises comparing said return signal frequency
5 with said forward signal frequency to determine any
6 frequency difference therebetween.

1 **24.** (new) The method according to claim 23, further comprising
2 providing an authorization signal to allow access to a
3 motor vehicle only if said frequency difference is zero.

1 **25.** (new) The method according to claim 17, wherein said
2 forward signal and said return signal both have the same
3 frequency.

1 **26.** (new) The method according to claim 17, further comprising
2 checking, in said first unit, whether a carrier frequency
3 of said forward signal remains continuously present without
4 interruption from said transmitting of said forward signal
5 until said receiving of said return signal.

1 **27.** (new) The method according to claim 17, wherein said
2 transmitting and receiving by said first unit are both
3 carried out via a single first unit antenna, and said
4 transmitting and receiving by said second unit are both
5 carried out via a single second unit antenna.

1 **28.** (new) A system for bi-directional data transmission between
2 two transmitting and receiving units including a first unit
3 and a second unit, wherein:

4 said first unit comprises a first antenna, a first
5 data processor, a first transmitting amplifier connected
6 between an output of said first data processor and an input
7 of said first antenna, a first receiving amplifier having
8 an input connected to an output of said first antenna, and
9 a first signal processor that has an input connected to an
10 output of said first receiving amplifier and has an output
11 connected to an input of said first data processor, and
12 that is adapted to measure a first received amplitude of a

13 first signal received via said first antenna and said first
14 receiving amplifier; and

15 said second unit comprises: a second antenna; a second
16 data processor; a second transmitting amplifier connected
17 between an output of said second data processor and an
18 input of said second antenna; a second receiving amplifier
19 having an input connected to an output of said second
20 antenna; and a second signal processor that has an input
21 connected to an output of said second receiving amplifier
22 and has an output connected to an input of said second data
23 processor, and that is adapted to measure a second received
24 amplitude of a second signal received via said second
25 antenna and said second receiving amplifier;

26 wherein said second data processor is adapted to
27 provide information representing said second received
28 amplitude to said second transmitting amplifier to be
29 transmitted by said second transmitting amplifier via said
30 second antenna in said first signal; and

31 wherein said first data processor is adapted to
32 receive said information in said first signal and to
33 compare said second received amplitude with said first
34 received amplitude and provide a signal in response to and
35 dependent on any difference therebetween.

[RESPONSE CONTINUES ON NEXT PAGE]